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REMARKS

I. INTRODUCTION

Claims 1 and 10-16 have been canceled and Claim 3 has been amended to depend only from Claim 2 so that Claims 2-9, 17 and 18 are pending in the application, with Claims 2, 4, 7 and 17 being independent.

REJECTION OF CLAIMS 1-18 UNDER 35 U.S.C. 102(b)

The Examiner rejected Claims 1-18 under 35 U.S.C. 102(b) as being anticipated by U.S. Pub. No. 2003/0137293 to Welsch et al. ("Welsch"). The Examiner alleged that Welsch describes a magnet with front and back faces where the polarities of the faces are different from each other. Welsch describes two position sensors. The sensor illustrated in Fig. 1 measures a linear path and the sensor illustrated by Fig. 2 measures a radial path. Welsch describes that one end of the magnet has one polarity and the other end of the magnet has the opposite polarity. *See e.g.* end 8 and area 9 of Fig. 1 where the direction of the arrows indicate polarity and end 16 and area 17 of Fig. 2 where the direction of the arrows indicate polarity. Although Welsch describes a magnet that has different polarities at different areas along the length of the magnet, Welsch does not describe a magnet having front and back faces whose polarities are different from each other, as recited by Claims 2, 4, 7 and 17. As illustrated in the figures of the present application, the magnet has a front face that runs the length of the magnet that has one polarity and a back face that also runs the length of the magnet that has the opposite polarity. *See e.g.* Fig. 1a, 1b, 2, 3, 4, 6, where the front face has a N-pole and the back face has a S-pole.

The magnet described by Welsch generates magnetic flux with a single-loop structure, whereas a magnet as recited in Claims 2, 4, 7 and 17 generates magnetic flux with a two-loop structure. *See* Fig. 3b and the accompanying text. Since the magnet recited by Claims 2, 4, 7 and 17 generates magnetic flux with a two-loop structure, the linearity is improved, as described in Fig. 5b and the accompanying text. In contrast, the magnet

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described by Welsch suffers from the poor linearity described in the specification on page 2, lines 21-24 since it only generates magnetic flux with a single loop. Thus, the claimed invention is patentable over Welsch.

Claim 3 depends from Claim 2, Claims 5 and 6 depend from Claim 4, Claims 8 and 9 depend from Claim 7, and Claim 18 depends from Claim 17. The dependent claims are patentable over Welsch for at least the same reasons as the independent claims.

CONCLUSION

In light of the foregoing, it is respectfully submitted that the pending claims are allowable and a notice of allowance is respectfully requested. If there are any issues that can be resolved via a telephone conference, the Examiner is invited to contact Brenda Holmes at 404.685.6799.

Respectfully submitted,


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